# Canadian Mining PIC

## PIC

### Counterplan Text

#### Countries ought to enable the production of nuclear power if and only if they follow the Federal Dominion of Canada model.

#### It’s competitive – regulation is distinct from prohibition.

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### Advocate

#### The Federal Dominion of Canada model solves their offense – stringent standards and closure protocols. Requiring consultation with locals ensures enforcement.

Alberta Environment, 2008

“Environmental Impacts of Different Uranium Mining Processes” ISBN No. 978-0-7785-8125-3, pg 51-54 Considerations for economic success in controlling emissions at a new uranium production facility will include the following: • design of processes that apply proven and reliable technologies; • effective communication with project stakeholders; • streamlined environmental assessment and permitting; • application of best management practices, including periodic revision for continuous improvement; and • design and financial assurance for closure. 6.1 PROJECT DESIGN The Canadian uranium mining industry has demonstrated that emissions from conventional uranium mine facilities meet the most stringent standards, and that the exposure of workers and the general public to contaminants and radiation are well below accepted limits. The impact on the natural environment from uranium mining is also demonstrably low. The high performance of Canadian uranium mines is evident at facilities extracting low to medium and high grade uranium resources, both of which (high and low grade deposits) may be discovered in Alberta. A project proponent would likely consider the practices currently applied in Saskatchewan, adapting them only for site-specific conditions. For potential ISL development, the technologies successfully used at recent ISL operations in the United States would reasonably assure the protection of water resources and prevent the dispersion of radioactive materials on surface. 6.2 ENVIRONMENTAL ASSESSMENT AND PERMITTING For uranium mine developments in Canada and in the United States, the completion of environmental assessments (EAs), public consultations and permitting can be costly and take considerable time. Ecological and human health risk assessments with pathways analyses are essential tools in the environmental assessment process. Agencies of the Province of Alberta, and the CNSC could facilitate streamlining the EA, consultation and permitting processes by working closely together. 6.3 APPLICATION OF BEST MANAGEMENT PRINCIPLES Successful application of best available emission control technologies at an operating uranium mine or ISL facility can be enhanced by two key principles: • use of operational management principles that include continuous improvement such as ISO 14000; and • establishment of fully-funded, independent monitoring committees that include local people, to ensure that all emission control objectives are fully met. 6.4 PROVISION FOR CLOSURE The Province of Alberta would require project proponents to include in the project proposal, design and financial assurance for closure. For conventional uranium mining and milling facilities, this would include provision for removal of all site infrastructure, restoration of disturbed land, and long-term stabilisation of mine openings, waste rock and tailings. For ISL facilities, closure would include removal and decontamination of surface facilities, neutralisation and stabilisation of the leaching zone(s) and plugging of all wells. For both conventional and ISL facilities, site monitoring would be required for many years and would be licensed by the CNSC. Experience across Canada has shown that monitoring could continue for several years before the CNSC would issue a license to abandon the property. 12 MPMO – Major Project Management Office, a recent (October 2007) initiative of the Government of Canada, is being established to improve the performance of the federal regulatory system for major natural resource projects. 7.0 CONCLUSIONS Canada is a world leader in uranium production. Uranium mining technology is well advanced in Canada to protect people and the environment. As a result, radiation exposures and doses to uranium exploration and mine workers, and to the public, from uranium mine development, operation and closure are well below limits. Advanced engineering practices keep environmental disturbances to a minimum. Supplying uranium for the generation of electricity from nuclear energy is an activity that can be considered in Alberta to meet increasing demands for energy that has low greenhouse gas emissions. As nuclear energy regains acceptance in Canada and around the world, demand for uranium climbs, and with it so does the economic feasibility of uranium mining in Alberta. Extensive prospecting for uranium has shown the potential that economic deposits may exist in the province. Regulatory measures for uranium mining are well developed at the international and national levels. In Canada, all existing uranium- and nuclear-related developments are very strongly regulated, involving multiple permits and licences in addition to comprehensive environmental assessment by provincial and federal authorities. Streamlining of the process would reduce costs and cut the time required to license a facility. Although some measures are in place to regulate mining in general at the provincial level, Alberta has yet to modify its regulatory framework to address uranium mining in particular. For conventional uranium mining, the approach used in Saskatchewan could be adopted to suit Alberta’s needs. Since no framework yet exists in Canada for the regulation of In SituLeaching (ISL) facilities, modification of the United States model can be considered for ISL projects. In addition, site specific, local initiatives, such as current land use, might need to be considered in the development of in situ recovery methods. Consultation will be an essential component of any successful approach to the future development of uranium mining facilities in Alberta. Local residents play a vital role in the decision-making process; public opposition to uranium mining can be considerable, which could result in lengthy licensing delays and even cancellation of a project. Consultation establishes a means to discuss and resolve issues, and to ensure that any proposed uranium development projects will take into account effects on current and traditional land use. It also helps facilitate public access to verifiable scientific information, on the basis of which to make informed decisions regarding individuals’ support for (or opposition to) various aspects of a proposed project. Effective regulation of uranium mine developments in Alberta will successfully blend together the interests of the Province with the existing requirements of national and international regulatory bodies. At the same time, it will facilitate incorporation of the priorities of local residents and groups, while ensuring the application of best available practices for the protection of individuals and the environment. With a strong, streamlined regulatory process in place for uranium mining, Alberta and Albertans will be well positioned to pursue the economic benefits of uranium mine developments in a manner that is both safe and clean.

### Impact – Natives

#### Canadian-Indian mining deal employs thousands of aboriginal peoples with high-paying jobs – external impact and solves case.

Steven Chase and Kim Mackrael, 2015

“Canada, India agree to $350-million uranium supply deal”, The Globe and Mail, Ottawa. <http://www.theglobeandmail.com/news/politics/canada-india-agree-to-major-uranium-supply-deal/article23967494/>

**Saskatchewan Premier Brad Wall, who played a major role in the deal, characterized the sale as helping a country with similar values and a boon for his province.** “Our **uranium producers are excited and ready to supply product to India, the world’s largest democracy,”** Mr. Wall said. **He said 45 per cent of Cameco’s work force in Saskatchewan is aboriginal. “This is the largest industrial employer of First Nations and Métis people in our province.” The Premier said a starting job as a miner pays $60,000 to $70,000. “These are good careers.”** Critics of the deal suggest providing India with uranium for its nuclear power plants will free up New Delhi to use other stores of the radioactive ore for nuclear weaponry. Mr. Wall said **Canada is “responsible for our uranium” – and ensuring it is used for peaceful means by India – and should not deny itself business in rapidly growing markets such as India and China.**

### Impact – Tech

#### Canada has the best uranium mining tech in the world – it’s the cleanest and dangerous/older methods are being phased out.

* Phases out old mines
* Transitions from second-generation to high-grade uranium mines
* Utilizes technological innovations and infrastructure.

World Nuclear Association, 2016

World Nuclear Association is the international organization that supports nuclear power’s regulation, manufacture, and industry. “Uranium Mining Overview”, February 2016.

As earlier in Australia, there was a period in the early 1990s when the Saskatchewan government considered phasing out uranium mining in the province, but this policy was abandoned after a joint federal-Saskatchewan study found that the benefits of mining outweighed the impacts, and that any impacts could indeed be minimized. Today the government actively supports uranium mining in the province. Canada's share of known world uranium resources is currently about 8%, but it produces about 16% of the mined uranium supply making it the second largest producer in the world behind Kazakhstan. Most uranium is exported, but about one fifth is used domestically. Canada has made a transition from second-generation uranium mines (started 1975-83) to new high-grade ones, all in northern Saskatchewan, making its uranium mining operations among the most advanced in the world. Cameco operates the McArthur River mine, which started production at the end of 1999. Its ore is milled at Key Lake, which once contributed 15% of world uranium production but is now mined out. Its other former mainstay is Rabbit Lake. Areva's Cluff Lake mine is now closed, and is being decommissioned. Cameco's Rabbit Lake mine was brought into production in 1975. Most of the deposit has been mined out. Production from underground mining continues at over 1000 tU/yr but will phase out in the next few years. McArthur River has enormous high-grade reserves of over 20% uranium ore at a depth of about 600 metres. It opened at the end of 1999 and is now the largest uranium mine in the world by a wide margin. Remote-control raise-boring methods are used for mining and the ore is trucked 80 km south to the modified Key Lake mill, where it is blended with 'special waste rock' to produce 7400 tU/yr. Tailings are deposited in a mined-out pit. Cameco is the operator and majority owner, with Areva (30.2%) as partner. Areva Resources operated the McClean Lake mine which commenced operation in mid-1999. It has new plant and other infrastructure and uses the first mined-out pit for tailings disposal (the ore having been stockpiled). The McClean Lake mill is the only one in the world able to process very high grade ore without dilution, and it now treats all Cigar Lake ore. Cigar Lake is a 450 m deep underground mine in poor ground conditions, using ground freezing and high-pressure water jets for excavation of ore. High-grade ore slurry from remote mining is trucked for treatment at Areva's expanded McClean Lake mill, 70 km northeast, and to Cameco's Rabbit Lake mill 70 km east, to produce 7000 tU/yr from about 2018. A major flood in 2006 and another in 2008 set the project back several years and pushed costs up from C$660 million to more than C$2.6 billion. The joint venture is managed by Cameco which holds 50%, and Areva holds 37%. Areva's large Kiggavik deposit in the Nunavut Territory has evident potential, as do several other significant deposits.